What Has the Literature Taught Us About Cultural Competency Training for Providers? A systematic review and research proposal

By

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Abstract

Racial and ethnic disparities in patient health outcomes have been recognized in the United States for over 30 years as minorities continue to account for a disproportionate burden of the morbidity and mortality of many disease states and continue to utilize less preventive care, necessary health care services, and advanced medical procedures than Whites. Most public health studies on the issue of health care disparities focus on patient level and structural level factors, but as the United States' population becomes increasingly diverse, health care professionals are becoming progressively more responsible for the health care management of people from various races, ethnicities, languages and cultures.

Despite the interest and attention on cultural competency as a method to reduce health disparities and increased funding for initiatives and programs, the effectiveness of cultural competency training for providers remains relatively unsubstantiated by the literature. Methodological problems and lack of standardization in interventions and outcome measurements make conclusions difficult to draw. In implementing cultural competency training programs, we have already made a rather large assumption that cultural competence can be learned. However, we do not know the potential for such a brief intervention to affect the practice habits of physicians and whether or not this will be a long lasting effect.

This research protocol attempts to answer the question of the ability of cultural competency training delivered in a single session, consistent with current practices, to change provider practices and reduce health differentials. Specifically, we ask does cultural competency training for primary care providers influence glucose control (as measured by Hgb A1C) in African American patients with Type II diabetes? Future studies may wish to look at the effectiveness and cost of multiple interventions, and we need more methodologically sound studies that also examine the association between culturally competent providers and the elimination of health disparities for other patient populations and disease states.

INTRODUCTION

Currently, racial and ethnic minorities make up at least 30 percent of the U.S. population, and by the year 2100, it is estimated that non-Hispanic Whites will comprise only 40 percent of the total American population.[1] Racial and ethnic disparities in patient health outcomes have been recognized in the United States for over 30 years, yet despite an improved life-expectancy for all races and ethnicities, disparities still exist in this country which spends more on health care than any other nation in the world. Minorities continue to account for a disproportionate burden of the morbidity and mortality of many disease states and continue to utilize less preventive care, necessary health care services, and advanced medical procedures than Whites.[2-3] Most public health studies on the issue of health care disparities focus on patient level and structural level factors, but as the United States' population becomes increasingly diverse, health care professionals are becoming progressively more responsible for the health care management of people from various races, ethnicities, languages and cultures.

A theory that is receiving much attention recently is to help alleviate health disparities in the United States through providing culturally and linguistically competent health care to minority patients with the *potential* to reduce racial and ethnic disparities in health and health care services and to improve the health status of all Americans.[4-5] An inability to communicate with a health care

provider creates barriers to accessing health care, decreases the likelihood of follow-up, and limits trust in the medical system which can lead to diagnostic errors and inappropriate treatment. An individual's culture and ethnicity affect their understanding of "health" and "illness" and their interpretation of appropriate medical care which may not be readily apparent to providers. The underlying argument for cultural competency and linguistically appropriate services is that by improving these domains of health care, providers will establish effective interpersonal and working relationships that transcend cultural differences and will communicate in a manner that is meaningful to the patient.

Looking at the possible contributors to health care inequalities that continue to exist in the United States, in 2003, the Institute of Medicine (IOM) issued *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*, which identified cultural competency training as one potential strategy to address the gaps in the quality of care received by racial and ethnic minorities, as well as other groups who experience unequal access to health services.[6] The rationale behind this recommendation is that stereotypes and racism, whether personally mediated, internalized, or institutional, shape behaviors during the clinical encounter, influence decisions made by providers, and ultimately affect the quality of patient care. In addition, in March 2001, the U.S. Department of Health and Human Services (DHHS), Office of Minority Health (OMH) issued national standards for culturally and linguistically appropriate services (CLAS) in the provision of health care.[7] By setting forth fourteen standards **(see Appendix 1)**

within three domains (culturally competent care, language access services, and organizational supports for cultural competence), the OMH encouraged the elimination of racial and ethnic health disparities in an effort to improve the health of all Americans. Among their recommendations was the ongoing education and training of providers in domains of cultural competence.

Cultural Competency Training in Medical Education

Now that cultural competency training is considered a federal standard of care, many accreditation bodies have required implementation among their educational objectives, while medical schools, residency training programs, and continuing medical education (CME) programs continue to develop curriculum to meet these goals.[8-9] Despite the attention and funding that have gone into cultural competency medical education training, no standard guidelines exist to help educators and researchers effectively design, measure, evaluate, or report on these programs. Thus the heterogeneity of curricular content and educational interventions, teaching methods, and use of evaluation tools makes it difficult to judge the impact of training on health outcomes.[10]

Several recent and comprehensive systematic reviews examined cultural competency medical education training. One study by Price et al. examined the methodological rigor of studies of cultural competency training targeted at health professionals to improve minority health. The authors concluded that a lack of methodological rigor limits the conclusive evidence that can be drawn from studies and that more attention should be placed on the proper design, evaluation,

and reporting of training programs.[10] Another study by the Task Force on Community and Preventive Services looked at several interventions to improve the cultural competence in health care systems with cultural competency training of health care providers being among them. For all the interventions considered, the group could not determine the effectiveness of any of them because of either a lack of comparative studies or lack of evaluation of the outcomes set forth in the review.[11]

In a recent evidence report by the Agency for Healthcare Research and Quality (AHRQ), the authors performed a comprehensive literature search to determine the effectiveness of cultural competency training.[12] Of the sixty-four trials that qualified for their review, only two described a randomized controlled trial study design while eight studies were concurrent controlled trials and only four had an external control group. In addition, most studies did not incorporate a comparison group in the study design having a post-intervention evaluation only (n=25), a pre- and post-intervention evaluation (n=20), or a qualitative evaluation (n=5). Most of the studies reported on knowledge, attitude, and skills/behavior outcomes with only three studies looking at any sort of patient oriented outcome. Among those three articles, all reported favorably on patient satisfaction, one reported on improved patient adherence, and none described any patient health outcomes (**Appendix 2**). The authors acknowledged that one important gap in the literature was the lack of evidence linking cultural competency training to any measurable improvement in patient health outcomes.

Potential Benefits and Risks of Cultural Competency Training

No intervention is one hundred percent efficacious and the potential for harm in implementing cultural competency education must be taken into account. In promoting ethnic-specific health messages, we may be generating negative stereotypes and facilitating the very system we wish to change.[11] Also, some patients may feel more comfortable using family members as interpreters rather than using a trained interpreter to convey their personal thoughts and wishes. Finally, some patient populations may have an inherent distrust of the medical system or of white providers that is rooted in historical and personal experiences, and that no amount of cultural competency education will change.

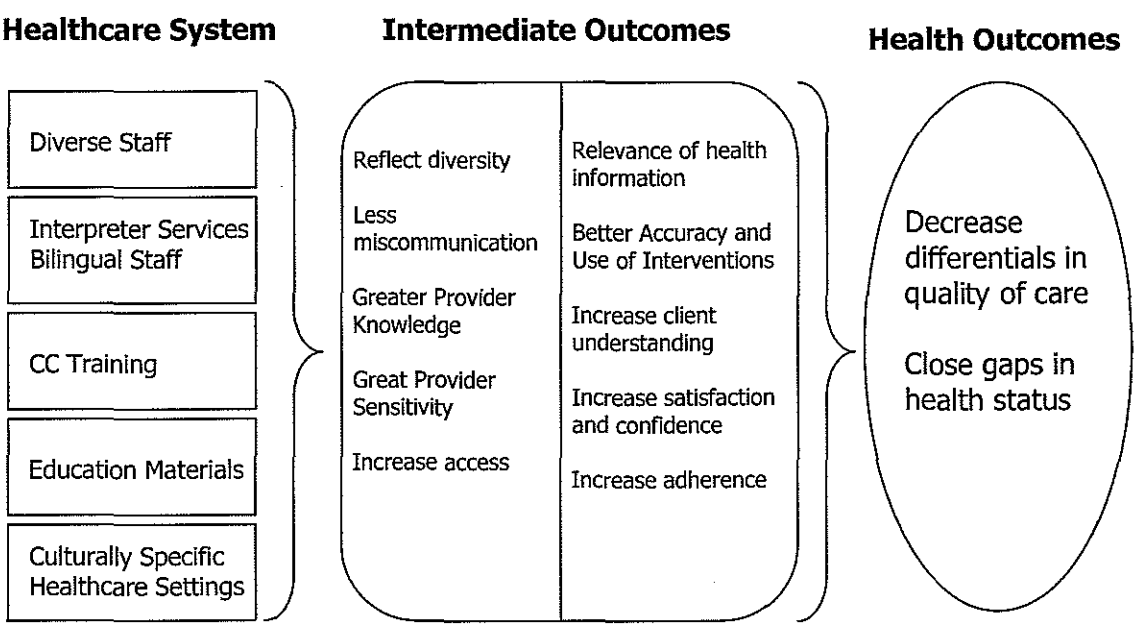
Uncertainty on multiple levels of implementation and actual effect of educational programs is also a key consideration. The current amount of funding and attention placed on an unproven intervention such as cultural competency education could be invested in other better studied contributors to health disparities such as differential access to care, health insurance inequities, and income dualism. Even if such educational and training initiatives prove to increase the level of cultural competence of providers, other more significant issues such as patient factors (e.g. noncompliance and low attendance at clinic appointments) and system factors (e.g. difficult access to clinics and a medical system that cannot be navigated by patients with low literacy) may overshadow any potential benefit. Also, critically thinking about cultural competency education, what is the potential for a brief intervention to affect the practice habits of physicians? Will this be a lasting effect? Who will benefit the most? Again in

the absence of proven effectiveness, many providers and organizations should question the utility of implementing interventions to improve the cultural competency of health care systems.

Other Strategies to Address Cultural Competency

In 2003, the U.S. Task Force on Community Preventive Services presented a conceptual framework to understand the potential benefits and mechanisms of a culturally competent health care system on health disparities (**see Figure 1**)[11]. The interventions that the group evaluated for effectiveness by searching the literature included increasing and maintaining provider diversity, improving linguistically appropriate services (e.g. interpreters, bilingual staff), improving linguistically and culturally appropriate education materials, creating culturally specific health care settings, and providing cultural competency training for health care providers.

Figure 1. Conceptual Framework[11]



Anderson LM, Scrimshaw SC, Fullilove MT, Fielding JE, Normand J; Task Force on Community Preventive Services. Culturally competent healthcare systems. A systematic review. *Am J Prev Med.* 2003 Apr;24(3 Suppl):68-79.

Since patients tend to seek out providers of the same racial or ethnic background, increasing the diversity of the workforce in the health care system may positively influence the way that organizations serve the needs of clients of various cultural and linguistic backgrounds. However, no comparative studies exist that evaluate the effectiveness of programs that recruit and retain a diverse staff, and the evidence is insufficient to determine its benefit.[11] Similarly, limited English proficiency for recent immigrants and lack of ethnic match between staff members and patients may decrease or delay health care seeking behavior. Again, no comparative studies have evaluated the effectiveness of culturally or ethnically specific clinics and services located within communities.[11]

In addition, patients should be able to fully understand the nature and purpose of the health care services they receive. By providing linguistically appropriate services through the proper use of interpreters or bilingual staff, patients are more likely to receive the most appropriate care, understand the plan of treatment, and adhere to clinical advice. Also health information messages through print, video, television, or radio, developed for the majority population, may be unsuitable for other cultural and ethnic groups as beliefs about disease vary between populations. Despite finding several studies that address the effectiveness of having bilingual staff, professional interpreters, or culturally appropriate health education materials, the Task Force found insufficient evidence for any of these interventions in terms of improving client satisfaction, racial or ethnic differentials in utilization and treatment, or health status measures.[11]

Cultural Competency Training and Patients Health Outcomes

Studies, to date, have not demonstrated that physician cultural competency training can affect clinical outcomes in their patients. We propose a randomized clinical trial to measure patient health outcomes in African American and White diabetic patients who receive care from physicians randomized to cultural competency training vs. usual medical training. We chose diabetes as a disease model due to its high prevalence in the general population and known severe outcomes in the absence of ongoing medical care. We chose Hgb A1C as a measure of glucose control because of the established evidence of it as a predictor of diabetic complications and the proven effect of improved control of HgbA1C on complication risk.[14-15]

In addition, the literature has established that African Americans experience poorer glycemic control, as measured by Hgb A1C, than Whites.[16-21] The disparities in diabetes prevalence and diabetes-related adverse health outcomes between White and African-American populations are pervasive and well documented in the literature.[15-21] Research studies demonstrate, for example, that African-American diabetics are seven times more likely than white diabetics to have amputations and develop kidney failure. In addition, diabetes-related blindness is more prevalent in African Americans, Hispanics, and Native Americans than in Whites.[22] We designed our study to address the following research questions:

1) Does cultural competency training for primary care providers influence glucose control (as measured by Hgb A1C) in African American patients with Type II diabetes?

2) Does cultural competency training for primary care providers influence glucose control (as measured by Hgb A1C) in other patient populations with Type II diabetes?

3) Does cultural competency training for primary care providers influence self-reported domains of cultural competence (as measured by the Clinical Cultural Competency Questionnaire[23]) such as knowledge, skills, encounters/situations, attitudes, education/training, and impact?

SYSTEMATIC REVIEW

Literature Search

We searched the Cochrane Collaborative database (including the Cochrane Database of Systematic Reviews (Cochrane Reviews) and the Cochrane Central Register of Controlled Trials (Clinical Trials)) to identify any potential reviews or abstracts of randomized controlled trials performed in the area of cultural competency. When we used the terms "cultural competency", "cultural diversity", "cultural sensitivity", "culture", and "disparity" in separate searches, we found no studies or reviews identifying either provider interventions or patients outcomes regarding cultural competency education or training.

We then examined the MEDLINE database using Medical Subject Headings (MeSH or MH) as search terms when available or key words when appropriate. We combined terms for cultural competence (cultural competence OR cultural competency OR cultural diversity OR cultural sensitivity), outcome assessments (educational measurement OR program evaluation OR assessment OR effectiveness OR impact OR outcome), and diabetes (diabetes OR hyperglycemia OR hypoglycemia OR hemoglobin A1C OR glycemic OR control OR diabetics). To be included in the systematic review, studies needed to be in the ENGLISH language, involve HUMAN subjects, and fall between the dates of 1/1/1950 to 6/15/2006. We reviewed all abstracts (n=46) and downloaded all relevant articles accessible through the UNC Health Science Library online subscription.

In addition, we searched the ISI Web of Knowledge Database (includes Science Citation Index Expanded, Social Sciences Citation Index, and Arts & Humanities Citation Index), the Dissertation Abstract Database, reference lists of reviewed articles, and referrals from specialists in the field to find any other articles not found in the MEDLINE or Cochrane Collaborative databases.

Study Selection

After reviewing all abstracts, we decided if the studies met eligibility criteria, and excluded those that did not. We obtained full texts of all remaining articles. Studies needed to have a cultural competency intervention, a diabetic patient population of any ethnicity, and report on patient outcomes. Although this study is a randomized controlled trial (RCT), we did not limit reviewed articles to this type of study because of the already limited literature. We did not exclude based on study type (e.g. case report, case series, qualitative reports).

Results from Literature Search

Five studies met eligibility criteria **(see Figure 2)**. We have briefly summarized the studies below **(see Figure 3)**. All studies reported on a culturally competent education or empowerment intervention for patients of a specific race (Chinese-Americans, Mexican-Americans, African-Americans, and minorities of Denmark). These studies also reported on various psychological and physiological measurements (e.g. Hgb A1C, Fasting Plasma Glucose (FPG), Body Mass Index (BMI)). Only one study examined an educational or training intervention for providers. However, this was not the primary intervention of the

study and the actual effect from provider education cannot be determined.[24] Only one study had a comparison group[26].

Figure 2. Quorum Tree

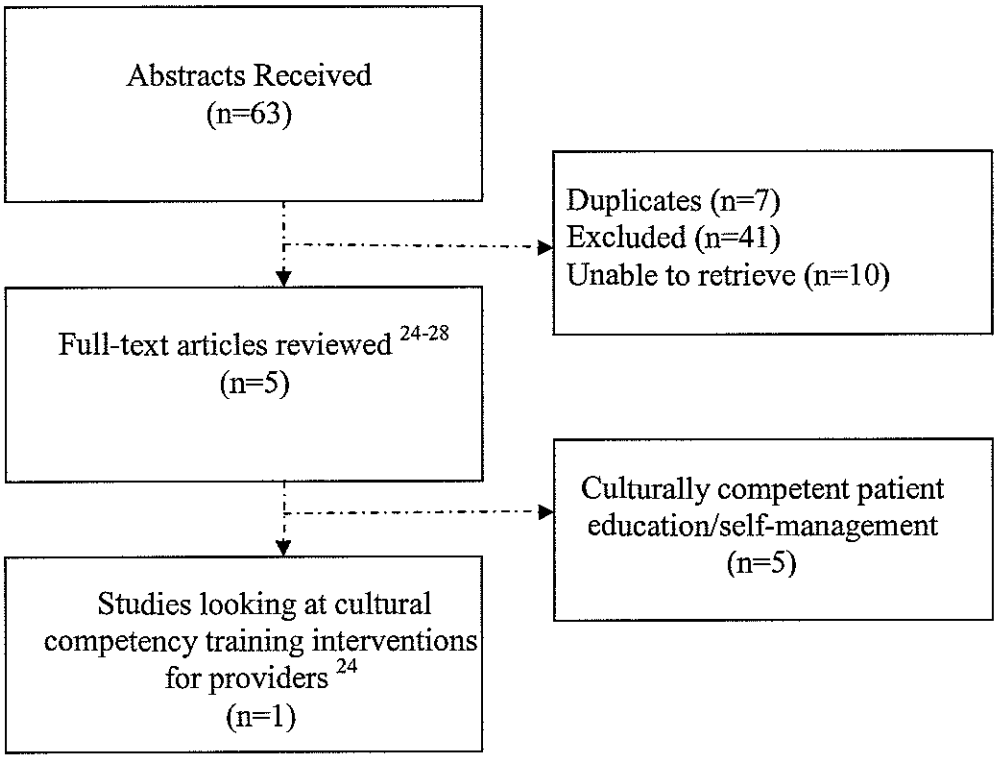


Figure 3. Summary of Studies [24-28]

Study and Year	Intervention	Outcome Assessment	Measurement	Effect (p-value)
Poylsen et al., 2005 (24)	**Setting:** Denmark, minority families with children with type I diabetes (n=37) **Intervention:** 1)Adapted and translated education materials and education session for families 2) Guidelines for health professionals **Control:** None	**Outcomes:** 1) Family questionnaires responses 2) Metabolic control (Hgb A1C and episodes of hypoglycemia or ketoacidosis)	Families (child and at least one parent) filled out questionnaire before and after intervention (80%) Hgb A1C measured at central lab	After intervention average Hgb A1C dropped from 9.2 to 8.6 ($p<0.01$) but returned to 8.9 and 9.1 at 3 and 6 month follow-up respectively
Wang et al., 2005 (25)	**Setting:** Hawaii, 40 Chinese-Americans with type II diabetes **Intervention:** 10 session program integrating traditional Chinese values and culture into Western	**Outcomes:** 1) Diabetes Quality of Life (DQOL) Score 2) Body weight 3) Blood pressure 4)Hgb A1C	Measurement done before, after, and 3 month post intervention 33/40 patients completed the 10 session program	43.6% of participants lost >5 lbs at 3 months SBP decreased from 131.5 (SD=13.6) to 113.7 (SD=46.2)

	diabetes management program **Control:** None			Hgb A1C levels dropped from 7.11 (SD = 1.1) to 6.12 (SD=2.4) at 3 months
Brown et al., 2002 (26)	**Setting:** Starr County, Texas, **Intervention:** 3 months of weekly instructional sessions on nutrition, self-monitoring blood glucose, and self care. 6 months of bi-weekly support groups. Intervention was culturally competent in terms of language and incorporation of health beliefs. (n=128) **Control:** Waiting list and usual care (n=128)	**Outcomes:** 1) Hgb A1C 2) Fasting glucose 3) Diabetes knowledge 4) Diabetes self-belief 5) Lipids 6) BMI	Data collected at baseline and at 3, 6, and 12 months	Mean Hgb A1C levels in intervention group was 1.4% lower than control at 6 months However mean Hgb A1C level of experimental group still >10% Improvements in FPG and diabetes knowledge in experimental group
D'Eramo-Melkus et al., 2004 (27)	**Setting:** Convenience sample of 25 AA women with diabetes in an urban community **Intervention:** 6 weekly sessions on diabetes self-management and care led by trained facilitators **Control:** None	**Outcomes:** 1) Glycemic control (FPG and Hgb A1C) 2) Weight 3) BMI 4) Diabetes related emotional stress	Data collected at baseline and 3 months post-intervention	Improvements in all physiological and psychosocial measurements. Improved Hgb A1C from 8.0 to 6.9 (p=0.002) Improved FPG from184 to 161 mg/dl (p=0.05)
Loftin et al., 2005 (28)	**Setting:** Rural community in SC. Convenience sample of 23 AA patients **Intervention:** Culturally competent four 1.5 hour dietary education classes, 2 monthly 1 hour discussion groups, weekly nurse care manager follow-up phone calls **Control:** None	**Outcomes:** 1) Hgb A1C 2) FPG 3) Lipids 4) Weight 5) Fat-related dietary habits		Data suggest a reduction in Hgb A1C, FPG, lipids, and weight. Data suggest improvement in fat-related dietary habits

METHODS

Study Population

This study looking at Hgb A1C outcomes in individual patients seen by primary care provider groups in North Carolina will employ a cluster or group randomized study design. The unit of randomization will be provider groups with individual providers and individual patients nested within this group.

Primary care providers

The source population will be all primary care provider groups (≥2 providers/practice) in North Carolina who treat adult patients with Type II diabetes. Primary care providers will be defined as an MD, DO, FNP, or PA with training in Internal Medicine or Family Medicine. Minimal inclusion criteria will include: a practice in North Carolina, ≥5% patient population with type II diabetes, ≥20% nonwhite patient population, and no prior cultural competency training as a provider. We will make initial contact via postal mailings outlining study objectives, inviting provider groups to participate, and asking if they meet minimal eligibility criteria as outlined above. We will obtain mailing lists through professional organization listings (e.g. Society of General Internal Medicine, American Academy of Family Physicians, North Carolina Medical Society, NC Academy of Family Physicians, North Carolina Chapter of the American College of Physicians) and through telephone listings with duplicates removed. Primary care provider groups consenting to participate will be group randomized to either an intervention or control group.

Patients

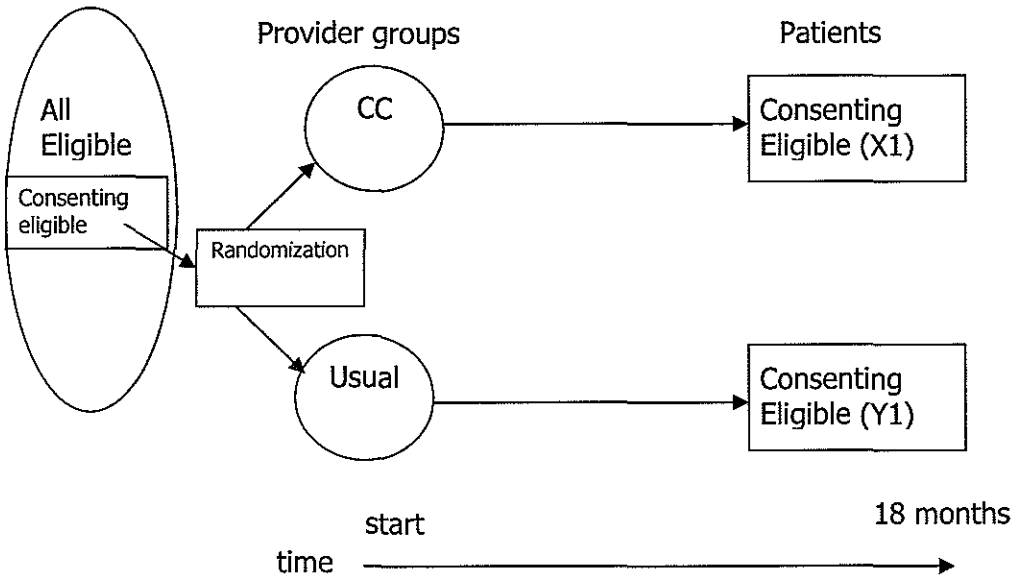
Eligible patients will be consecutive patients of consenting provider groups who meet the following inclusion and exclusion criteria: adult (≥18 years of age) with Type II diabetes, diagnosis with diabetes > 1 year, and at least one clinic visit with primary care provider group in the past year. Based on a previous study[31],

and taking into account the intraclass correlation (ICC) and design effect (DEFF), we calculated a needed sample size of 605 African American patients to detect a 0.5 difference in mean Hgb A1C between groups (alpha = 0.05, power = 0.80, standard deviation = 1.5). Based on assumptions of 25 African American patients enrolled per cluster, we would need to enroll 25 primary care provider groups. We would also like to detect Hgb A1C differences between White and African-American diabetics so we will enroll an equal number of White patients (n=605) for a total of 1210 patients (N=1210) and 50 provider groups. Once provider groups consent to participate in the study but before randomization occurs, the study team will invite all patients with Type II diabetes within their practice to participate and enroll consecutive consenting eligibles with a maximum of 25 per provider group cluster.

The study team cannot mask provider groups to treatment allocation because they are receiving an education intervention. However, by having the study team enroll patients, we are able to mask providers to which patients we are following in the study. In addition, patients, data collectors, lab technicians, investigators. To keep investigators masked to intervention allocation, an independent group will make the treatment assignments. This independent panel will consist of two UNC primary care physicians and two community physician affiliates and will not be involved with any of the data collection or analysis. In addition, the independent panel will monitor any adverse events in the study via self-report from participating providers and patients and statisticians will be masked to

treatment allocation in order to maintain integrity and validity of the data. See **Figure 4** for a simple study design overview.

Figure 4. Study Design Overview



CC = Cultural Competency Training Intervention

Intervention

Primary care provider groups consenting to participate in the study will be group randomized to either the educational intervention or control group. The educational intervention group will receive a standardized one-day session moderated by trained cultural competency facilitators for 8 hours of Continuing Medical Education (CME) credit followed by a catered meal (lunch or dinner). The facilitators will undergo one week of training on the presentation of the course content. The content of the one-day session will follow guidelines put forth by the Health Resources and Services Administration (HRSA) in their report

An Organizational Cultural Competence Assessment Profile.[29] The Assessment Profile is an analytic and organizing framework composed of specific indicators used as a tool for examining, demonstrating, and documenting cultural competence in organizations involved in the direct delivery of health care and services. The Assessment Profile has three major components: 1) ***domains*** of cultural competence; 2) ***focus areas*** within domains; and 3) ***indicators*** relating to focus areas, by type of indicator. **Appendix 3** highlights the major domains of cultural competence and the focus areas within each domain. **Appendix 4** outlines the indicators by focus area within each domain.

By using this Assessment Profile to guide the course content, we hope to have a more objective, standardized education program than those previously demonstrated in the literature with reproducibility for future studies. We will measure adherence by signed attendance rolls at the beginning and end of the session for provider groups randomized to the educational intervention arm. Control groups will continue usual care.

Outcome Measurement

We will randomize provider practices that meet eligibility criteria and consent to participate using a computer program employing a clustered randomization procedure to either the educational intervention or control. A research assistant who is not part of the data collecting process will be in charge of the randomization procedures, and the research team will keep the randomization list

in a locked file not accessible to blinded personnel including investigators, patients, lab processors, statisticians, clinicians, and other research personnel.

The study team will collect baseline characteristics of providers via self-report and will include characteristics such as age of provider (in years), sex of provider (M/F), race/ethnicity of provider (Caucasian/White, African-American/Black, Latino/Hispanic, Asian/Pacific Islander, Native American/Alaskan, Other), number of years in practice (in years), type of clinical training (Family Medicine, Internal Medicine, Nurse Practitioner, Physician Assistant), and self-reported geographic origin (Northeast, South, Midwest, West, International). In addition, baseline characteristics of patients who volunteer to participate will be collected including, age of patient (in years), sex of patient (M/F), race/ethnicity of patient (Caucasian/White, African-American/Black, Latino/Hispanic, Asian/Pacific Islander, Native American/Alaskan, Other), number of years with diabetes (in years), last in-office Hgb A1C (%), number of diabetes medications, and use of insulin status (yes/no).

Clinics participating in the study will collect Hgb A1C measurements on their Type II diabetic patients with a frequency set forth by the provider according to their group practice guidelines. Due to variations between providers on the frequency of clinical visits and Hgb A1C measurements, we plan to take an 18-month average for comparison across groups. Again, we will mask diagnostic labs, data collectors, statisticians, and investigators to the allocation of provider group and patients.

Along with the lack of a standardized approaches to teaching cultural competency, the assessment measures of providers to detect cultural competency "when we see it" is also highly variable in the literature.[10-13] Using an assessment tool developed by the University of Medicine and Dentistry of New Jersey Robert Wood Johnson Medical School called the Clinical Cultural Competency Questionnaire (CCCQ)[23] to assess knowledge, skills, encounters and situations, attitudes, education and training, and impact, the research team will collect data at baseline and upon completion of the study.

Variables

The primary research question looks at the influence of cultural competency training on glucose control (as measured by Hgb A1C) in African American patients with Type II diabetes. However, we also have an interest on the effects of cultural competency on glucose control for other patients seen in the clinic especially Whites who typically have better Hgb A1C scores than all other racial and ethnic groups.[16-21] We will power our study to look at clinically significant differences in our primary outcome, Hgb A1C average over 18-months, between African-Americans seen by providers who receive the cultural competency education intervention versus those who continue usual care. We will also enroll an equal number of White patients to see statistically significant differences between African-Americans and Whites in addition to differences between White patients seen by the intervention and control provider groups. Since past studies have consistently shown poorer glycemic control in African Americans compared

to whites, the main outcome of interest will be the patient's change in HBA1C from baseline (immediately before provider has cultural competency training) to 18 months.

Our independent variables will include the baseline characteristics of the providers[age of provider (in years), sex of provider (M/F), race/ethnicity of provider (Caucasian/White, African-American/Black, Latino/Hispanic, Asian/Pacific Islander, Native American/Alaskan, Other), number of years in practice, type of clinical training (Family Medicine, Internal Medicine, Nurse Practitioner, Physician Assistant), and self-reported geographic origin (Northeast, South, Midwest, West, International)]. In addition, we will collect baseline characteristics of patients [age of patient (in years), sex of patient (M/F), race/ethnicity of patient (Caucasian/White, African-American/Black, Latino/Hispanic, Asian/Pacific Islander, Native American/Alaskan, Other), number of years with diabetes (in years), last in-office Hgb A1C (%), number of diabetes medications, and use of insulin status (yes/no)].

Secondary outcomes will include the physicians' baseline and 18-month scores from the Clinical Cultural Competency Questionnaire (CCCQ)[23] in the domains of knowledge, skills, encounters/situations, attitudes, education/training, and impact.

Statistical Analysis

The study will be a superiority trial with an intention to treat analysis comparing cultural competency education training to usual care for providers of Type II diabetics. In order to ensure the success of randomization, the research team will calculate averages for continuous independent variables and proportions for categorical independent variables, based on the allocation of intervention, and compare the two groups (**Table 1a**). In addition, we will likewise evaluate the baseline characteristics of patients based on provider allocation to ensure comparability (**Table 1b**).

Bivariate Analysis

For our primary outcome of glucose control as measured by Hgb A1C, we will calculate paired T-tests comparing Hbg A1C at baseline and the 18-month average for the two groups at end of study. In addition to looking at mean changes in Hgb A1C in the entire patient population (**Table 2a**), we will also stratify our analysis by race (**Table 2b**). In addition we will use an analysis of co-variance to model the relationship between the cultural competency intervention and Hbg A1C, adjusting for baseline patient and provider characteristics.

For our secondary outcome, we will use paired T-tests to compare questionnaire responses at baseline and at 18 months for providers in both the intervention and control group looking at scores across the various domains (knowledge, skills, encounters/situations, attitudes, education/training, and impact) as well as total scores. In addition, we will use an analysis of co-variance to model the

relationship between the cultural competency intervention and CCCQ scores, adjusting for baseline provider characteristics (**Table 3**).

Multivariate Analysis

The research team will use linear regression models for changes in patient's average Hgb A1C scores to estimate the independent association between cultural competency training for providers and glycemic control in patients. All patient-specific and provider-specific variables will be included in the initial model. The final model will include all variables with an independent association with changes in patient's average Hgb A1C scores at $P<0.10$. In addition, we will stratify our analysis by race. In order to account for the clustering effects of the study design, the research team will also analyze data based on a random effects multi-level linear regression model. To appropriately model patient-level and physician-level covariates simultaneously, we develop a two-level hierarchical model.[30]

The study team will consider a P value of less than 0.05 (2-sided) to be statistically significant and will perform all analyses using STATA 9.0 (Stata Corporation, College Station, Tex).

RESULTS (dummy tables)

Table 1a. Baseline Characteristics of Provider Groups

	Intervention	Control
Mean age (y)		
Mean years in practice (y)		

Sex %Male %Female		
Race %Caucasian/White %African-American/Black %Latino/Hispanic %Asian/Pacific Islander %Native American/Alaskan %Other		
Type of training %Internal Medicine %Family Medicine %Nurse Practitioner %Physician Assistant %Other		
Geographic origin %Northeast %South %West %Midwest %Other (including foreign)		

Table 1b. Baseline Characteristics of Patients

	Intervention	Control
Average age (y)		
Sex of patient %Male %Female		
Race of patient %Caucasian/White %African-American/Black %Latino/Hispanic %Asian/Pacific Islander %Native American/Alaskan %Other		
Baseline HgbA1C		
Years with diabetes (y)		
% on insulin treatments		
# of diabetes medications %none %one %two %three %four of more		

Table 2a. Comparison of Mean Hgb A1C

	Intervention	Control	p-value
Baseline			
18 month			
% Change			

Table 2b. Comparison of Mean Hgb A1C, Stratified by Race

	Intervention (Black)	Control (Black)	p-value	Intervention (White)	Intervention (White)	p-value
Baseline						
18 month						
% Change						

Table 3. Provider Clinical Cultural Competency Questionnaire (CCCQ) Average Response Scores at Baseline and 18 months by Domain

	Intervention (baseline)	Intervention (18 months)	Control (baseline)	Control (18 months)	p-value
Knowledge					
Skills					
Encounters/ Situations					
Attitudes					
Education/ Training					
Impact					
Total Score					

Table 4. Adjusted Comparisons between Changes in Hgb A1C for Patients Seen by Providers with Cultural Competency Training vs. Usual Care

Model	Change in Hgb A1C (all)	Change in Hgb A1C (blacks)	Change in Hgb A1C (whites)
Unadjusted CC Training Usual Care			
Adjusted[1] CC Training Usual Care			
Adjusted[2] CC Training Usual Care			
Adjusted[3] CC Training Usual Care			

1: Based on beta estimates from a multiple linear regression model, adjusted for all possible covariates
2: Based on beta estimates from a multiple linear regression model, adjusted for variables with an independent association with changes in patient's average Hgb A1C scores at P<0.10
3: Based on random effects multi-level linear regression model

DISCUSSION

Design Considerations

This clinical trial will represent one of the first studies to prospectively examine the relationship between cultural competency training for providers and patient health outcomes. We have limited knowledge from previous research due to methodological issues such as non-randomized study design, pre- and post-questionnaire design looking at provider attitudes and knowledge with lack of control group, variations in cultural competency assessment tools, and no studies examining patient health outcomes.[10, 13] This randomized controlled trial will employ a cluster or group randomized study design. Our desire to measure a patient health outcome at the individual level coupled with the very nature of cultural competency training at the provider level lends itself well to such a study type. However, several key considerations regarding the design, conduct, analysis, and ethics of the study deserve mention.

The study team gave consideration to whether the cluster should be at the individual provider level or at the group practice level with the underlying patient population served as members nested within the group. Even if providers within a practice work independently of other providers in terms of practice style, we could not ignore the possible issue of contamination between providers who work

in the same practice. In addition, providers within a group practice often share patient populations leading us to choose the group practice as the level of randomization. This, however, limits our ability to recruit and randomize units, and we chose broad inclusion/exclusion criteria in order to facilitate enrollment of clusters.

The idea of having an intervention at a group level and measuring outcomes at an individual level creates several unique issues. Unlike individually randomized trials, we cannot assume the outcome for each participant to be independent of that of other participants and standard approaches no longer apply. Outcome measurements from members of the same group tend to be more alike than outcomes from different groups. The intraclass correlation (ICC) quantifies the extent of between-group variation and within group homogeneity. In addition, the design effect (DEFF) is the ratio of the number of subjects needed in a group-randomized trial versus an individually randomized trial. Using the methods described by Donner and Klar[32], an ICC from a previous study[31], and an assumption of 25 patients enrolled per cluster, we calculated a DEFF of 2.128 and a sample size of 605 patients to detect a mean difference of 0.5 in Hgb A1C (alpha = 0.05, power = 0.8, standard deviation = 1.5).

In terms of masking, we cannot mask the providers to whether or not they receive the cultural competency training intervention. However, the patients, data collectors, lab technicians, investigators, and statisticians will be blinded to

treatment allocation thereby preserving validity. In addition, the study team will enroll patients within consenting practices in order to mask providers to which patients are in the study. The study team will contact patients via postal mailings and meet with patients outside of the clinic in order to further explain the study and emphasize the need to not tell providers of their participation status. An independent study panel at UNC will assign the treatment allocations.

Unlike traditional randomized controlled trials, for this trial consent must be received by both the provider and the patient. We plan to measure adherence at the provider level for the cultural competency education intervention through signed attendance rosters. We will not measure directly adherence to clinical treatment recommendations for patients, but instead follow Hgb A1C averages over 18-months as an overall indicator of glucose control.

Ethically, we believe that there is equivocal evidence for or against cultural competency training. Although several studies looking at cultural competency training for providers establish to varying degrees that it improves aspects such as patient satisfaction and provider knowledge, no study and certainly no randomized controlled trials have investigated its value toward patient health outcomes.[10-13] In addition, our study design addresses other ethical issues such as scientific validity, fair subject selection, informed consent, and respect for potential and future subjects.[33] A favorable risk benefit ratio exists as the potential for adverse events due to an educational intervention is low with the

potential implications for future practice, research, education, and policy addressed later in this paper. However, judging from past studies, it is possible that cultural competency training will not lead to clinically meaningful improvement in patient outcomes.

Finally, examining outcomes at various levels calls for several considerations in the analysis of the data. We must account for the design effect (DEFF) not only in our sample size but also in our analyses especially since we are interested in individual-level effects which inflate the variances and reduce the significance of effects. In our crude analysis of our primary outcome (Hgb A1C) and secondary outcomes (questionnaire responses), adjustments need to be made for the clustering effect of our study design. Also we may have to consider non-traditional statistical methods such as a random effects linear model for multi-level analyses, a marginal or population-averaged (GEE) model, and a non-parametric permutation test.

Potential Limitations of This Study

Although studies have not previously demonstrated a direct link between cultural competency training for providers and the improvement of health outcomes and the reduction of health disparities, this research protocol has several limitations worth mentioning as they may also relate to and aid future studies.

A selection bias may exist for those providers or provider groups who choose to participate in this study or any future study aiming to examine the issue of cultural

competency training and health disparities. Providers who volunteer to take part in the study may be significantly different in their practice style, clinical training, cultural background, geographic location, etc. than those who do not volunteer thus creating a biased or unrepresentative study sample. Through the use of randomization, although by provider group practices, we hope to minimize this potential effect by having balanced groups allocated to either the cultural competency education intervention versus usual care. Ideally, randomization would occur at the individual provider level as providers tend to have practice styles that vary independent of their group practice. However, issues of potential contamination of the educational intervention and the sharing of patient populations between providers led to the decision to randomize by provider practices and account for clustering effects in our analysis.

The United States is not a homogeneous nation as the racial mix of patient populations, extent of provider diversity, and emphasis on serving various racial and ethnic minorities varies from state to state. This study looking to evaluate the effectiveness of cultural competency training for providers is limited to primary care providers who practice within the state of North Carolina. Although the conclusions that can be drawn may be limited to the geographically, North Carolina has one of the fastest growing Latino populations in the country, greater percentage of African-Americans than the U.S. average, and historical roots in agriculture and slavery is well suited for a study looking at cultural competency.[34] However, future studies may want to look at the relationship between cultural

competency interventions for providers and health disparities on a broader geographical scale and for different racial/ethnic populations.

Any study looking at racial/ethnic health disparities should actively seek to enroll minority populations that relate to the research question at hand. With an inherent mistrust in the medical system rooted in past events (e.g. Tuskegee syphilis trial), other historically unethical dealings with minority populations (e.g. Native Americans, Japanese Americans), and the current political climate over the immigration status of Latinos, minority participation in research studies continues to be a very pertinent issue.[35-38] This research protocol, with its primary research question looking at the effectiveness of cultural competency training for providers on the glycemic control of African-American diabetics, pre-specifies the number of African-American and White participants for statistical and clinical significance, sets eligibility criteria for provider practices ($\geq$20% nonwhite patient population), and requires at least a one year relationship between patient and provider in order to ensure enrollment and reduce loss to follow-up.

Finally, this study did not look at other intermediate patient outcomes such as patient satisfaction, patient adherence, and miscommunication between patient and provider which may be interesting to examine in future studies.

Strengths of the Study

One of the difficulties thus far with evaluating the effectiveness of cultural competency training interventions for providers is the fact that no consensus

exists on how best to provide the necessary knowledge, skills, experience, and attitudes to effectively serve diverse populations. Thus studies continue to use non-standardized content, various delivery methods, and non-objective measurements making comparisons between studies difficult and conclusions from the literature difficult. Hoping to create a standardized educational intervention that is replicable, this study bases its educational intervention on guidelines put forth in the Health Resources and Services Administration (HRSA) report entitled *An Organizational Cultural Competence Assessment Profile*.[29]

Studies from the literature on cultural competency also demonstrate a lack of standardization of measurements with many studies using non-objective outcomes or un-validated tools. For its primary outcome, our study uses Hgb A1C as an objective measurement of glycemic control because of the established evidence of it as a predictor of diabetic complications and the proven effect of improved control of HgbA1C on complication risk.[14-15] The literature has also established that African Americans experience poorer glycemic control, as measured by Hgb A1C, than Whites lending itself particularly well to our study question.[15-21] To assess provider knowledge and attitudes, this study employs the use of the Clinical Cultural Competency Questionnaire (CCCQ), a validated instrument created by the Robert Wood Johnson Scholars Foundation.[23] However, because this study uses outcome measurements not seen in other research on this issue, comparability again becomes an issue.

The results of this research study will give us much needed evidence either for or against the use of cultural competency training as a method to reduce health disparities. However, cultural competency training is only one intervention mentioned in the conceptual framework by the U.S. Task Force on Community Preventive Services.[11] As discussed previously, we also need stronger evidence to support the other interventions for cultural competent health care systems looking both at important intermediate outcomes and clinically relevant health outcomes. In addition, this study only addresses the effectiveness of cultural competency training for the specific population and disease outcome evaluated.

Potential Implications for Clinical Practice, Research, Education, or Policy

Currently numerous professional associations (e.g. LCME, ACGME, American Nurses Association, American Medical Association) support cultural competence education, and many specialty-driven organizations have made policy statements and requirements for education, training, and clinical practice.[39-45] In addition, many states are taking cultural competency initiatives in response to an increasing body of literature emphasizing the disparities in medical care for minority populations, a continually rising number of minority and other underserved populations, and action by the federal government on this topic. For example states such as New Jersey, California, Washington, and Massachusetts, have taken action at a policy level by enacting bills that set standards and expectations for providers, clinics, and other health related services while other states, such as Illinois, New York and Arizona are approaching the issue by funding programs

and initiatives to provide cultural competency training in addition to considering policy level actions.[46-57]

Conclusion

Despite the interest and attention on cultural competency as a method to reduce health disparities and increased funding for initiatives and programs, the effectiveness of cultural competency training for providers remains relatively unsubstantiated by the literature. In implementing cultural competency training programs, we have already made a rather large assumption that cultural competence can be learned. However, we do not know the potential for such a brief intervention to affect the practice habits of physicians and whether or not this will be a long lasting effect. In general, studies demonstrate that the effectiveness of one-time educational interventions are limited, but may be increased through multiple interventions over time. This research protocol attempts to answer the question of the ability of cultural competency training delivered in a single session, consistent with current practices, to change provider practices and reduce health differentials. Future studies may wish to look at the effectiveness and cost of multiple interventions, and we need more methodologically sound studies that also examine the association between culturally competent providers and the elimination of health disparities for other patient populations and disease states.

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Appendix 1: U.S. DHHS Office of Minority Health CLAS Standards[7]

Culturally competent care

Standard 1: Healthcare organizations should ensure that patients or consumers receive from all staff members effective, understandable, and respectful care that is provided in a manner compatible with their cultural health beliefs and practices and preferred language.

Standard 2: Healthcare organizations should implement strategies to recruit, retain, and promote at all levels of the organization a diverse staff and leadership that are representative of the demographic characteristics of the service area.

Standard 3: Healthcare organizations should ensure that staff members at all levels and across all disciplines receive ongoing education and training in culturally and linguistically appropriate service delivery.

Language access services

Standard 4: Healthcare organizations must offer and provide language assistance services, including bilingual staff and interpreter services, at no cost to each patient or consumer with limited English proficiency at all points of contact, in a timely manner during all hours of operation.

Standard 5: Healthcare organizations must provide to patients or consumers in their preferred language both verbal offers and written notices informing them of their right to receive language assistance services.

Standard 6: Healthcare organizations must assure the competence of language assistance provided to limited English proficient patients or consumers by interpreters and bilingual staff members. Family and friends should not be used to provide interpretation services (except on request by the patient or consumer).

Standard 7: Healthcare organizations must make available easily understood patient-related materials and post signage in the languages of the commonly encountered groups or groups represented in the service area.

Organizational supports for cultural competence

Standard 8: Healthcare organizations should develop, implement, and promote a written strategic plan that outlines clear goals, policies, operational plans, and management accountability or oversight mechanisms to provide culturally and linguistically appropriate services.

Standard 9: Healthcare organizations should conduct initial and ongoing organizational self-assessments of CLAS-related activities and are encouraged to integrate cultural and linguistic competence-related measures into their internal audits, performance improvement programs, patient satisfaction assessments, and outcomes-based evaluations.

Standard 10: Healthcare organizations should ensure that data on the individual patient's or consumer's race, ethnicity, and spoken and written language are collected in health records, integrated into the organization's management information systems, and periodically updated.

Standard 11: Healthcare organizations should maintain a current demographic, cultural, and epidemiologic profile of the community as well as a needs assessment to accurately plan for and implement services that respond to the cultural and linguistic characteristics of the service area.

Standard 12: Healthcare organizations should develop participatory, collaborative partnerships with communities and use a variety of formal and informal mechanisms to facilitate community and patient or consumer involvement in designing and implementing CLAS-related activities.

Standard 13: Healthcare organizations should ensure that conflict and grievance resolution processes are culturally and linguistically sensitive and capable of identifying, preventing, and resolving cross-cultural conflicts or complaints by patients or consumers.

Standard 14: Healthcare organizations are encouraged to regularly make available to the public information about their progress and successful innovations in implementing the CLAS standards and to provide public notice in their communities about the availability of this information.

Appendix 2: Studies Looking at Patient Oriented Outcomes

Study and Year	Intervention	Outcome Assessment	Measurement	Effect (p-value)
[1]Wade & Bernstein, 1991	Setting: Counseling center on metropolitan college campus Intervention: 4 hours of cultural sensitivity training for counselors (2 black, 2 white) Control: usual training (2 black, 2 white)	Outcomes: 1) scale rating satisfaction with care 2) completion of 3 counseling sessions (n=80)	Follow-up at 2 week to 3 month post-intervention	Client satisfaction with care: Std effect size 1.6 ($p<0.001$) Percent attending all 3 sessions: 33% greater in intervention group ($p<0.001$)
[2]Way et al., 2002*	Setting: NY State Office of Mental Health Intervention: state mandated 3 day training program focused on team training, recipient recovery, clinical issues, and cultural competence of staff Control: None			Reported favorably on satisfaction measures related to interpersonal aspects of care
[3]Mazor et al., 2002	Setting: Pediatric emergency room in Chicago Intervention: 9 pediatric ED physicians completed 10-week medical Spanish language course Control: None	Outcomes: 1) Responses to patient family satisfaction questionnaires. Pre-intervention (n=85) Post-intervention (n=58)	Spanish-speaking only families completed satisfaction questionnaire immediately after interaction with physician	Improved patient satisfaction: -"the physician was concerned about my child" (OR, 2.1; 95% CI, 1.0-4.2), -"made me feel comfortable" (OR, 2.6; 95% CI, 1.1-4.4) -"was respectful" (OR, 3.0; 95% CI, 1.4-6.5) -"listened to what I said" (OR, 2.9; 95% CI, 1.4-5.9)

*Could not obtain journal

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Appendix 3: An Organizational Cultural Competence Assessment Profile:

Domains and Focus Areas[29]

DOMAIN	FOCUS AREAS
Organizational Values: An organization's perspective and attitudes regarding the worth and importance of cultural competence, and its commitment to providing culturally competent care.	• Leadership, Investment and Documentation • Information/Data Relevant to Cultural Competence • Organizational Flexibility
Governance: The goal-setting, policy-making, and other oversight vehicles an organization uses to help ensure the delivery of culturally competent care. "	• Community Involvement and Accountability • Board Development • Policies
Planning and Monitoring/Evaluation: The mechanisms and processes used for: a) long- and short-term policy, programmatic, and operational cultural competence planning that is informed by external and internal consumers; and b) the systems and activities needed to proactively track and assess an organization's level of cultural competence.	• Client, Community and Staff Input • Plans and Implementation • Collection and Use of Cultural Competence-Related Information/Data
Communication: The exchange of information between the organization/providers and the clients/population, and internally among staff, in ways that promote cultural competence.	• Understanding of Different Communication Needs and Styles of Client Population • Culturally Competent Oral Communication • Culturally Competent Written/Other Communication • Communication with Community • Intra-Organizational Communication
Staff Development: An organization's efforts to ensure staff and other service providers have the requisite attitudes, knowledge and skills for delivering culturally competent services.	• Training Commitment • Training Content • Staff Performance
Organizational Infrastructure: The organizational resources required to deliver or facilitate delivery of culturally competent services	• Financial/Budgetary • Staffing • Technology • Physical Facility/Environment • Linkages
Services/Interventions: An organization's delivery or facilitation of clinical, public-health, and health related services in a culturally competent manner.	• Client/Family/Community Input • Screening/Assessment/Care Planning • Treatment/Follow-up

Appendix 4: An Organizational Cultural Competence Assessment Profile:

Indicators by Focus Area[29]

DOMAIN: Organizational Values

FOCUS AREAS	STRUCTURE PROCESS	STRUCTURE PROCESS	OUTPUT
Leadership, Investment, Documentation	• Individual(s) at executive level with responsibility for implementing/monitoring cultural competence plans/initiatives • Team/committee of mid- and high-level staff responsible for coordinating cultural competence (and diversity) activities • Funding related to cultural competence activities		• Overall investment in cultural competence • Mission statement addresses cultural competence • Strategic plan addresses cultural competence, including a cultural competence plan • Business plan addresses cultural competence • Program plans address cultural competence • Staff awareness/acceptance regarding contents of relevant plans • Client/community awareness regarding contents of relevant plans • Materials expressing the organization's commitment to cultural competence

Information/ Data Relevant to Cultural Competence	• Mechanisms for collection of cultural competence-related information/data (client- and population-level) • Mechanisms for appropriate dissemination of cultural competence-related information/data	• Conducts regular organizational self-assessments regarding cultural competence • Requires/facilitates regular individual provider assessments regarding cultural competence • Obtains client-level cultural competence-related information • Conducts regular community/needs assessments • Evaluates cultural competence-related activities	• Flow and feedback of cultural competence-related information/data for use in policy, program, operations, and treatment planning and implementation
Organizational Flexibility		• Systematic and ongoing examination and use of information/data relevant to cultural competence	• Administrative and service delivery adaptations tailored to population in service area, including adaptations to improve access to care

DOMAIN: Governance

FOCUS AREAS	STRUCTURE	PROCESS	OUTPUT
Community Involvement and Accountability	• Diverse governing body or policy influencing group, with representatives from groups served • Community advisory committee(s), representative of groups served	• Community participants are provided financial and other supports for their involvement on governing board and advisory committees	• Percentage and retention of community members on governing body and advisory committees • Reports to stakeholders on cultural competence activities/issues
Board Development		• Has ongoing education	

		of governing body regarding cultural competence	
Policies			• Formal cultural competence-related policies exist regarding: - personnel recruitment/retention - training/staff development -language access/communication -cultural competence-related grievances/ complaints - community/client input

DOMAIN: Planning and Monitoring/Evaluation

FOCUS AREAS	STRUCTURE	PROCESS	OUTPUT
Client/ Community and Staff Input	• Membership on relevant planning committees of community participants that represent groups served • Membership on relevant monitoring/review committees of community participants that represent groups served	• Process for obtaining client/community input in the development of cultural competence-related plans • Process for obtaining staff input in the development of cultural competence-related plans • Process for obtaining client/community and staff input in cultural competence-related monitoring and evaluation	• Consumer participation/satisfaction regarding cultural competence-related planning • Staff participation/satisfaction regarding cultural competence-related planning

Plans and Implementation			• Planning documents, including fiscal plan, addressing cultural competence issues • Integration and implementation of cultural competence plan
Collection and Use of Cultural Competence-Related Information/ Data*	• Data sources and systems that support proactive cultural competence planning at all levels (policy, program, operations, treatment) • Resources and capacity to collect/manage/report cultural competence-related information/data	• Uses community/client cultural competence-related data in planning (policy, program, operations, treatment) • Monitors/evaluates implementation and results of cultural competence plans/activities as part of quality improvement activities	• Timely and accurate cultural competence-related data • Monitoring and evaluation reports related to cultural competence

DOMAIN: Communication

FOCUS AREAS	STRUCTURE	PROCESS	OUTPUT
Understanding of Different Communication Needs and Styles of Client Population	• System for informing patients of right to free interpretation/translation services • System for identification and recording of population's and client's language preferences, level of proficiency, and literacy • System for access to trained interpreters • Curriculum and training programs for interpreters and staff	Provides for staff training regarding cross-cultural communication " Monitors and evaluates cultural competence in organizational and provider communications	• Special "communication" initiatives • Universal" language access • Linguistically competent services provided • Staff demonstrates/applies effective communication styles with diverse groups

	• Fixed point of administrative responsibility for cross-cultural communication support system		
Culturally Competent Oral Communication	• Mechanisms for providing access to trained interpreters • Trained bi-lingual staff • Protocol(s) for when and how to elicit sensitive information from clients • Policy in place that minimizes the use of family members as interpreters	• Provides for training and testing of interpreters and bi-lingual staff • Provides for staff training on use of interpreters	• Languages/dialects of community available at point of first contact and all levels of interaction • Extent of use and timeliness of interpretation service, including requests and fulfillment of requests • Client understanding of interpreted material • Low interpretation errors
Culturally Competent Written /Other Communication	• Criteria available for assessing capability of vendors that translate materials	• Uses a quality review mechanism to ensure that translated materials convey intended meaning • Engages in culturally appropriate dissemination of written/other materials	• Signage, administrative documents, health information materials, and all key written/other materials in language of the groups served • Written/other material appropriate to literacy level of populations served • Client understanding of written/other materials
Communication with Community	Mechanism for systematic and ongoing communication with community	Engages in two-way communication with community from which clients/potential clients come/may come	

Intra-Organizational Communication	• Policies, workplace design, and mechanisms in place to promote integration of staff of various backgrounds	• Processes to promote effective communication among diverse staff	• Staff demonstrates cultural competence in communications with co-workers

DOMAIN: Staff Development

FOCUS AREAS	STRUCTURE	PROCESS	OUTPUT
Training Commitment	• Has training plan for staff development in cultural competence • Training in cultural competence linked to quality improvement efforts (as core competency)	• Provides basic/initial and periodic cultural competency training for all staff • Incorporates cultural competency training into overall staff training activities • Consultation provided on cultural competence, upon request • Offers regular opportunities for staff to interact with community • Conducts regular monitoring and periodic evaluations of cultural competency training efforts • Disseminates information on staff training opportunities and policies	• Investment (monetary and other) in cultural competency training • All staff complete basic/initial and periodic cultural competency training

Training Content	• Cultural competence curricula address key cultural competence-related knowledge, skills, and attitudes (as generally applicable and as related to specific relevant groups) • Cultural competence curricula particularized to roles of persons trained (e.g., clinical, front-line, administrative, marketing, etc.)	• Assesses cultural competency training needs of staff • Obtains community input regarding staff training • Assesses the quality of staff training in cultural competence	• Staff demonstrates cultural competence in knowledge, skills, attitudes, and behaviors (as generally applicable and as related to specific relevant groups)
Staff Performance	• Cultural competence is a part of job descriptions • System of incentives (individual and team) for cultural competence behaviors/activities	• Assesses staff performance regarding cultural competence • Staff performance evaluations are conducted in a culturally competent manner	Staff performance (including self-efficacy) in application of cultural competence principles/practices

DOMAIN: Organizational Infrastructure

FOCUS AREAS	STRUCTURE	PROCESS	OUTPUT
Financial/ Budgetary	• Person(s) designated to monitor the need for additional resources or funding	• Process for enhancing resources related to cultural competence (e.g., grant writing, fundraising activities)	• Overall budgetary allocation and investment in cultural competence activities, aligned with strategic plan
Staffing	• A plan for recruitment, retention, and promotion of staff representative of the population(s) served • Designated staff responsible for cultural competence implementation/activities	• Active staff recruitment for diversity and cultural competence • Active retention/promotion of	• Diverse staff at all levels • Community liaisons (e.g., ombudspersons, community

	• Staffing to facilitate client/community outreach and communication	culturally diverse workforce • Process for assessing the quality and cultural competence of relevant contractors/vendors	health workers, cultural brokers)
Technology	• MIS that includes/tracks cultural competence-related information on populations and clients served • Range of technology that facilitates communication between clients/population and health organization/providers	• Staff is trained to use, collect, and input data into the organization's information system in a consistent, standardized way	
Physical facility/ environment	• Culturally inviting and helpful environments (e.g., décor, color coding, literature, posters)		
Linkages	• Formal and informal alliances/links with community and other partners to address cultural competence issues	• Formal internal coordination to facilitate delivery of culturally competent care • Obtains and considers information on cultural competence of referral sources and partnering organizations	• Evidence of appropriate use of/referral to partners/alliance members

DOMAIN: Services/Interventions

FOCUS AREAS	STRUCTURE	PROCESS	OUTPUT

Client/Family/ Community Input	• Policies, protocols regarding client/family/ community input	• Obtains client, family, patient advocate input regarding care planning and treatment, as appropriate • Meets, during treatment, with client's family or advocate (as appropriate and with client consent) • Obtains community input regarding community-level interventions	• Care and treatment plan agreed on by client/family and amended with client/family input, as appropriate • Tailored outreach and community health education initiatives
Screening/ Assessment/ Care Planning	• Community and client assessment guidelines and tools exist to elicit cultural and demographic factors relevant to health and health behaviors • Appropriately detailed data routinely available re culture/language and needs/assets of populations and clients served • Mechanism for keeping providers updated on illness patterns and treatment efficacy issues (e.g., ethnopharmacology) relevant to groups served	• Identifies community/client beliefs, practices and culture-related factors • Addresses systematic cultural/ethnic factors in screening/assessment/care planning	• Provider compliance with assessment guidelines related to cultural competence • Focused prevention/treatment/maintenance plans reflecting cultural competence-related factors

Treatment/ Follow-up	• Practice guidelines and treatment framework that account for differences related to culture	• Makes accommodations to and integrates client's traditional health beliefs and practices, as appropriate • Utilizes community resources as treatment partners, as appropriate • Provides client- and population-level health education around issues that are specifically relevant in the community • Regularly assesses treatment processes and outcomes related to ethnic/cultural/language groups as part of quality monitoring and improvement program	• Individualized interventions applied in a patient- and family-centered fashion • Patient instructions (written and oral) reflect cultural competence • Care-facilitating outreach to clients/population from relevant cultural groups • Public health interventions reflecting needs of population in service area " Culture-specific quality assurance reports

INTERMEDIATE OUTCOME INDICATORS

ALL DOMAINS	ORGANIZATIONAL PERSPECTIVE	CLIENT PERSPECTIVE	COMMUNITY PERSPECTIVE

Organizational Values **Governance** **Planning and Monitoring/Evaluation** **Communication** **Staff Development** **Organizational Infrastructure** **Services/Interventions**	• Rate of appropriate use of services relative to need • Retention of clients/reduced attrition rates • Reduction in rates of broken appointments/ no-shows • Reductions in misdiagnoses and inadequate treatment plans • Rates of appropriate management of selected chronic conditions • Staff satisfaction	• Perceptions regarding: - cultural competence of providers/organization - how well organization meets their needs • Satisfaction with care • Knowledge/understanding regarding prevention, diagnosis, treatment plan • Agreement/compliance/adherence with treatment plan • Medication compliance/reduction in misuse of medications • Improved management of selected chronic conditions • Increase in healthy behaviors and prevention practices/reduction in risky behaviors	Opinions about the organization and its responsiveness to community needs